REMARKS

This amendment is in response to the Examiner's Office Action dated 9/23/2004. Claims 1, 3, 5, and 12 have been amended without adding new matter to clarify applicant's invention. Applicant wishes to note that the secondary reference used in the rejections with regard to claims 4 and 5 is the patent to Miyashita (USP 6,288,610), which is also assigned to Fujitsu Limited. Since both the pending patent application and the secondary reference used (Miyashita) are commonly assigned and since at the time the claimed invention was made the primary reference (Miyashita) and the claimed invention were both subject to an obligation to be assigned to Fujitsu Limited, the Examiner is hereby requested to withdraw the rejections with regard to claims 4 and 5 in compliance with MPEP section 706.02(1)(2). Reconsideration of this application is respectfully requested in view of the foregoing amendment and the remarks that follow.

STATUS OF CLAIMS

Claims 1-19 are pending.

Claims 1-3 and 6-19 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Matsuoka (USP 6400774).

Claims 4-5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuoka (USP 6,400,774) in view of Miyashita (USP 6,288,610).

OVERVIEW OF CLAIMED INVENTION

The presently claimed invention addresses distortion problems associated with prior art transmitting systems wherein non-linear input/output characteristic (distortion function) of the transmission power amplifier causes non-linear distortion. The presently claimed invention

provides for a distortion compensating method and apparatus implemented using <u>distortion compensation coefficients stored in memory</u> for correcting distortion of a power amplifier, wherein a distortion compensation coefficient <u>conforming to powers or amplitudes of a present transmit signal and a past transmit signal are read out of the memory</u> and distortion compensation processing is applied to the transmit signal using this distortion compensation coefficient. The transmit signal thus subjected to distortion compensation processing is then amplified by the transmission amplifier and the amplified signal is transmitted, and the distortion compensation coefficient is updated based upon the transmit signal before distortion compensation and an output signal from the transmission power amplifier.

<u>In the Claims</u>

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<u>REJECTIONS UNDER 35 U.S.C. § 102(e)</u>

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Claims 1-3 and 6-19 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Matsuoka (USP 6,400,774). To be properly rejected under 35 U.S.C. §102(e), <u>each and every element of the claims must be disclosed in a single cited reference</u>. The applicant, however, contends that the presently claimed invention cannot be anticipated in view of the Matsuoka reference.

The examiner, on pages 2-4 of the office action of 9/23/2004, contends that the Matsuoka et al. reference teaches all the limitations of independent claims 1, 3, and 12. The examiner makes specific reference to figure 5 and accompanying description in the specification of the Matsuoka et al. as support for this assertion. A closer reading of the citations and the entire Matsuoka et al. reference fails to teach or suggest many of applicant's claimed limitations.

Matsuoka et al. provides for a nonlinearity-caused distortion compensating system wherein a first means includes a first memory for storing signals representing a first reference table providing a relation between the first distortion compensating coefficients and the value calculated by the power calculating portion, and a second means includes a second memory for storing signals representing a second reference table providing a relation between the second distortion compensating coefficients and the value calculated by the power calculating portion.

As per Matsuoka et al., a coefficient calculation portion 108 calculates compensation coefficients Ci and Cq using the following equations:

$$Ci = Ai.Bi - Aq.Bq$$

$$Cq = Aq.Bi + Ai.Bq$$

where Ai denotes the I compensation coefficient represented by the output signal of the memory 104; Aq denotes the Q compensation coefficient represented by the output signal of the memory 104; Bi denotes the I compensation coefficient represented by the output signal of the memory 106; and Bq denotes the Q compensation coefficient represented by the output signal of the memory 106. A compensating portion 110 executes distortion compensation processing using the compensation coefficients Ci and Cq and a coefficient updating portion 223 updates the compensation coefficients Bi and Bq (see column 25, lines 59 – column 26, line 23 of the Matsuoka et al. reference).

However, conspicuously absent in the Matsuoka et al. reference is a teaching or suggestion for <u>storing, in memory, distortion compensation coefficients, with each conforming to a transmit signal and a past transmit signal (preceding the transmit signal),</u> limitations of independent claims 1, 3, and 12. Also conspicuously absent in the Matsuoka et al. reference is a

teaching or suggestion for <u>reading, out of the memory, a distortion compensation coefficient,</u> <u>which conforms to a present transmit signal and a past transmit signal and applying distortion</u> <u>compensation processing to the present transmit signal using the distortion compensation</u> <u>coefficients.</u>

As the Matsuoka et al. reference fails to at least teach the above limitations, applicant contends that the teachings of the Matsuoka et al. reference do not anticipate applicant's claimed invention. Hence, applicant respectfully requests the examiner to withdraw the rejections with respect to rejected independent claims 1, 3, and 12. Additionally, the above-presented arguments for independent claims 1, 3, and 12 apply substantially for rejected dependent claims 2, 6-11, and 13-19 as they inherit all the limitations of the claim from which they depend.

REJECTIONS UNDER 35 U.S.C. § 103(a)

Claims 4-5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuoka (6,400,774) in view of Miyashita (USP 6,288,610).

As mentioned in the 'Remarks' section of the current amendment, applicant wishes to note that the secondary reference used in the rejections with regard to claims 4 and 5 is the patent to Miyashita (USP 6,288,610), which is also assigned to Fujitsu Limited. Since both the pending patent application and the secondary reference used (Miyashita) are commonly assigned and since at the time the claimed invention was made the primary reference (Miyashita) and the claimed invention were both subject to an obligation to be assigned to Fujitsu Limited, the Examiner is hereby requested to withdraw the rejections with regard to claims 4 and 5 in compliance with MPEP section 706.02(1)(2).

It should, however, be noted that the request to withdraw the rejections regarding claims 4 and 5 does not indicate that the applicant acquiesces with the arguments put forth by the Examiner. For example, applicant wishes to note that the above-presented arguments for rejected claims 1-3 and 6-19 apply substantially to rejected claims 4-5 as they recite many of the limitations of rejected claims 1-3 and 6-19.
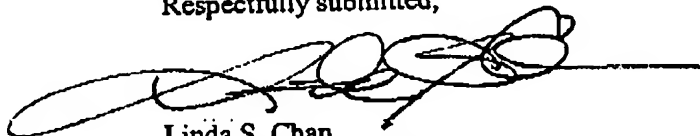
SUMMARY

As has been detailed above, none of the references, cited or applied, provide for the specific claimed details of applicant's presently claimed invention, nor renders them obvious. It is believed that this case is in condition for allowance and reconsideration thereof and early issuance is respectfully requested.

This Amendment is being filed with a petition for extension of time. The Commissioner is hereby authorized to charge the petition fee, as well as any deficiencies in the fees provided to Deposit Account No. 50-1290.

If it is felt that an interview would expedite prosecution of this application, please do not hesitate to contact applicant's representative at the below number.

Respectfully submitted,

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